

Attorney Docket: K-1851
S.N.: 10/623,844

Amendments to the Drawings:

The attached three (3) drawing sheets includes changes to Figures 1, 3 and 4. These sheets replaces the original sheets including Figures 1, 3 and 4. In Figure 1, previously omitted elements 28, 30 and 32 have been added. In addition, Figures 1, 3 and 4 are changed to more clearly define the margin that is ground around the perimeter of the top surface of the insert. No new matter has been added.

Attachment: Three (3) Replacement Sheets

REMARKS

Claims 1-17 and 20-22 are pending in the application. By this Amendment, Claim 12 is amended, and Claims 18 and 19 are canceled without prejudice or disclaimer of the subject matter contained therein. Favorable reconsideration is respectfully requested in light of the following Remarks.

1. The Office action rejects Claims 1, 10 and 11 under 35 U.S.C. §102(b) over David et al. (U.S. Patent No. 4,946,318, hereinafter “David”). The rejection is respectfully traversed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *See MPEP §2131*. Contrary to the Office action that all of the elements of Claim 1 is disclosed in David, at least the feature of an indexable cutting insert tangentially mounted in the insert pocket with a reverse lead angle, is not disclosed, taught or suggested in David, so the rejection is unsupported by the art and should be withdrawn.

In David, the insert 6, 7 is mounted in a slot 4', 5' provided in an indentation 4, 5 with two screws 8. However, the cutting insert 6, 7 in David is not tangentially mounted, let alone tangentially mounted with a reverse lead angle, as recited in Claim 1.

For at least this reason, Claim 1 is allowable over the applied art. Claims 10 and 11, which depend from Claim 1, are likewise allowable over the applied art. Withdrawal of the rejection is respectfully requested.

2. The Office action rejects Claims 12, 18, 19 and 20 under 35 U.S.C. §102(b) over Bernadic et al. (U.S. Patent No. 5,333,972, hereinafter “Bernadic”). The rejection is respectfully traversed.

Bernadic discloses a cutting insert 10 having an island 12, a chip breaker groove 14, and cutting corners 16, 18 diagonally opposite each other comprising a scalloped radius 20 and a chip directional flat 22 that form a pocket area 24. The chip breaker groove 14 is comprised of a chip breaker land or rake face 26 and an increasing incident angle surface 28. *See Figs. 1 and 2; col. 2, line 67-col. 3, line 7.*

Contrary to the Office action that all of the elements of independent Claim 12 is disclosed in Bernadic, at least the feature of a long edge surface defining a primary cutting edge that extends from a substantially flat central plateau, through a first facet face, through a second facet face adjacent the first facet face, through a third facet face adjacent the second facet face to one of the first and second radiused shorter edge surfaces, is not disclosed, taught or suggested in Bernadic, so the rejection is unsupported by the art and should be withdrawn.

For at least this reason, Claim 12 is allowable over the applied art. Claim 20, which depends from Claim 12, is likewise allowable over the applied art. Withdrawal of the rejection is respectfully requested.

In addition, Claim 20 is directed to a cutting insert that is tangentially mounted with a reverse lead angle. Although the cutting insert can be tangentially mounted, there is no mention in Bernadic of the cutting insert being tangentially mounted with a reverse lead angle, as recited in Claim 20.

For at least this additional reason, Claim 20 is allowable over the applied art. Withdrawal of the rejection is respectfully requested.

3. The Office action rejects Claims 13-18, 21 and 22 under 35 U.S.C. §103(a) over Bernadic. The rejection is respectfully traversed for several reasons.

First, Claims 13-17, 21 and 22 depend from Claim 12. As mentioned above regarding Claim 12, there is no mention in Bernadic of at least the feature of a long edge surface defining a primary cutting edge that extends from a substantially flat central plateau, through a first facet face, through a second facet face adjacent the first facet face, through a third facet face adjacent the second facet face to one of the first and second radiused shorter edge surfaces, as recited in Claim 12. Thus, the Bernadic does not disclose all the claim limitations, as recited in Claim 12, and the Office action does not establish a *prima facie* case of obviousness. *See MPEP §2143.*

For at least this reason, Claims 13-17, 21 and 22, which depend from Claim 12, are allowable over the applied art. Withdrawal of the rejection is respectfully requested.

Second, the Office action asserts that it would have been obvious to one having

ordinary skill in the art at the time the invention was made to use the claimed angle values and ranges because discovering the optimum or workable ranges involves only routine skill in the art. The Office action cites *In re Aller*, 220 F. 2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). However, it is respectfully submitted that *In re Aller* does not apply to the claimed invention.

It is true that when an Applicant seeks to overcome a *prima facie* case of obviousness by showing improved performance in a range that is within or overlaps with a range disclosed in the prior art, the Applicant must “show that the [claimed] range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.” *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ 2d 1934, 1936 (Fed. Cir. 1990). Under that standard in which the range is within or overlaps with a range disclosed in the prior art, the *Aller* court stated that “it is not inventive to discover the optimum or workable ranges by routine experimentation.”

However, Bernadic does not describe an insert mounted to a milling cutter tool, let alone any ranges for the mounting of the insert. Accordingly, Applicant respectfully submits that *Aller* does not apply in the instant application because the claimed ranges are not within or overlap with a range disclosed in the prior art.

For at least this additional reason, Claims 13-17, 21 and 22 are allowable over the applied art. Withdrawal of the rejection is respectfully requested.

4. The Office action rejects Claims 2 and 3 under 35 U.S.C. §103(a) over David. The rejection is respectfully traversed.

Claims 2 and 3 depend from Claim 1. As mentioned above, there is no mention in David of at least the feature of an indexable cutting insert tangentially mounted in the insert pocket with a reverse lead angle, as recited in Claim 1.

For at least this additional reason, Claims 2 and 3 are allowable over the applied art. Withdrawal of the rejection is respectfully requested.

5. The Office action rejects Claims 4-9 under 35 U.S.C. §103(a) over David in view of Bernadic. The rejection is respectfully traversed for several reasons.

First, the combination of David and Bernadic does not disclose all the claim limitations as recited in Claims 4-9, and the Office action does not establish a *prima facie* case of obviousness..

Second, *Aller* does not apply because the general conditions of the claim are not

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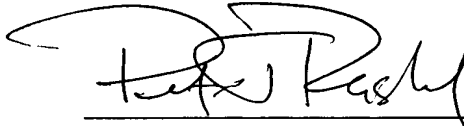
disclosed in the prior art.

For at least these reasons, Claims 4-9 are allowable over the applied art, taken singly of in combination. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of the application is earnestly solicited.

Should the Examiner believe anything further would be desirable in order to place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



SIGNATURE OF PRACTITIONER

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